

AMENDMENTS TO THE CLAIMS

Kindly amend claims **1, 5, 19** and add new claims **25-28** as shown in the listing of claims below.
This listing of claims will replace all prior versions, and listings of claims in the application.

LISTING OF CLAIMS

1. (currently amended) A Digital Focus Lens System for providing an optical system having a plurality of selectable focal powers, comprising:
a first switchable element capable of being switched between a first-element first-state and a first-element second-state; and
and a second switchable element capable of being switched between a second-element first-state and a second-element second-state;
wherein the first and second switchable elements are in optical communication with each other such that each of them may contribute to a cumulative focal power,
wherein, a first focal power may be selected by activation of the first switchable element to the first-element first-state and activation of the second switchable element to the second-element first-state,
wherein a second focal power is selected by activation of the first switchable element to the first-element second-state and activation of the second switchable element to the second-element first-state,
wherein a third focal power is selected by activation of the first switchable element to the first-element first-state and activation of the second switchable element to the second-element second-state, and
wherein a fourth focal power is selected by activation of the first switchable element to the first-element second-state and activation of the second switchable element to the second-element second-state.[[.]]

2. (original) The system according to Claim 1 wherein a portion of the switchable elements include liquid crystal lenses.

3. (original) The system according to Claim 1 wherein a portion of the switchable elements include switchable holographic optical elements.

1 4. (original) The system according to Claim 1 wherein a portion of the switchable elements
2 include polymer dispersed liquid crystal.

1 5. (currently amended) The system according to Claim 1 wherein a portion of the switchable
2 elements form a lens stack.[[.]]

1 6. (original) The system according to Claim 1 further comprising one or more non-switchable
2 elements for further modifying the optical properties of the system.

1 7. (original) The system according to Claim 1 further comprising any number of additional
2 switchable elements.

1 8. (original) The system according to Claim 1 wherein a portion of the switchable elements
2 include electro-optic lenses.

1 9. (original) The system according to Claim 1 wherein a portion of the switchable elements
2 include liquid crystal and polymer lenses.

1 10. (original) The system of claim 1 wherein the digital focus lens system is a digital telescope,
2 telephoto lens, or zoom lens.

1 11. (original) The system of claim 1 wherein the digital focus lens system is a digital camera.

1 12. (original) The system of claim 1 wherein the digital focus lens system is a digital projector.

1 13. (original) The system of claim 1 wherein the digital focus lens system is a digital microscope.

1 14. (original) The system of claim 1 further comprising a controller for providing control signals
2 that serve to activate the first and second switchable elements.

1 15. (original) The system according to Claim 1 wherein a portion of the switchable elements may
2 be continuously tuned between the focal powers of their respective first- and second-
3 states.

1 16. (original) The system of claim 1 further comprising one or more light sources for providing
2 light to be transmitted through and modified by the system.

1 17. (original) The system of claim 16 wherein the light is received and transmitted by the first
2 and second switchable elements and is modified in accordance with the selected focal
3 powers of the first and second switchable elements.

1 18. (original) The system of claim 17 wherein a portion of the light transmitted by the system
2 forms one or more images.

1 19. (currently amended) A method for fabricating a switchable element, comprising:
2 providing a structure having a conductive layer disposed between a substrate and a lens
3 function layer;
4 providing a die substrate with a spatially varying thickness pattern;
5 while the lens function layer is in a soft or viscous state, bringing the die surface into
6 contact with the lens function layer; and
7 hardening the lens function layer[[: and]].

1 20. (original) The method of claim 19, further comprising attaching a second lens function layer
2 to a surface of the substrate and, while the second lens function layer is in a soft or
3 viscous state, bringing a die surface with a varying thickness pattern into contact with the
4 second lens function layer, hardening the second lens function layer and separating the
5 die surface from the second lens function layer.

1 21. (original) A method for controlling a digital lens system having N switchable elements in
2 optical communication with each other such that each of them may contribute to a
3 cumulative focal power, where N is 1 or more, wherein each switchable element is
4 capable of being switched between a first-state and a second-state, the method
5 comprising:
6 generating a control signal containing information for controlling the states of each of the
7 N switchable elements; and
8 coupling the control signal to the N switchable elements to set the state of each of the N
9 switchable elements,
10 and wherein a portion of the control signal includes a data stream comprising a control
11 word.

22. (original) The method of claim 21 wherein the control word is a digital word having a bit field length of N bits.

23. (original) The method of claim 19 wherein the control signal is an electrical signal.

24. (original) The method of claim 23 wherein the control signal is at a voltage, current or frequency appropriate for activating the switchable elements to their desired states.

25. (new) The system of claim 1 wherein one or more of the first and second switchable elements is made by:
providing a structure having a conductive layer disposed between a substrate and a lens function layer;
providing a die substrate with a spatially varying thickness pattern;
while the lens function layer is in a soft or viscous state, bringing the die surface into contact with the lens function layer; and
hardening the lens function layer.

26. (new) The system of claim 25 wherein fabrication of one or more of the first and second switchable elements further includes:
attaching a second lens function layer to a surface of the substrate and, while the second lens function layer is in a soft or viscous state, bringing a die surface with a varying thickness pattern into contact with the second lens function layer, hardening the second lens function layer and separating the die surface from the second lens function layer.

27. (new) The system of claim 1 wherein one or more of the first and second switchable elements has a focal power that is continuously tunable.

28. (new) The system of claim 1 wherein one or more of the first and second switchable elements includes a fluid.